GRUMMAN plane news

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Tomcat on review

When Maj. General Sayed Javadi of the Imperial Iranian Air Force visited Calverton on April 8 he was greeted by President George Skurla, shown here with the general examining cockpit of F-14. The next day, Board Chairman Joe Gavin escorted General Javadi, F-14A Program Manager for Iran, during tour of Bethpage facilities. IIAF group visited Grumman for status review of Tomcat. (Photo by Dick Sander)

Board Chairman Joe Gavin reviews progress on Shuttle wing with General Javadi, Lt. Col. Sanavi Temadoon, and Dick Barton, managing director, F-14 Iran Operations.

At Calverton, General Javadi offers comment on Plant 6 engine shop to plant manager Frank Leone, engine supervisor Emil Albertuzzi, Dick Barton, and Vice President Mike Pelehach, F-14 Program director.

Tomcat is subject of this meeting of General Javadi, F-14A Program Manager for Iran, and Jim Peters, Plant 7 manager.

Honoring a graduate

It's been awhile since Bill Gureck worked at Grumman ... in fact, Gureck, a native of West Hempstead, came to Grumman nearly 30 years ago in July of 1945. He worked as an assembler-riveter that summer before returning to high school in the fall. (His mother Elizabeth also worked here about the same period.) He went on to join the Navy's aviation midshipman program, earned his wings in 1950, and then began a flying career that included a tour with the Navy's Blue Angels, several fighter squadrons, assignments to the Naval War College and Naval Postgraduage School, and service as Air Wing Five operations officer, executive officer and commanding officer of Fighter Squadron 53 aboard Hancock and Ticonderoga, commander Attack Carrier Air Wing 19 and operations officer for Commander Carrier Division 7. In recent years he has been executive assistant to the director, Navy Program Planning, and commanding officer of the USS Shreveport. He is now serving as commanding officer of the carrier J.F. Kennedy. Now a Navy captain, Bill Gureck was recently selected for promotion to rear admiral. From his many friends in the Grumman family, congratulations!

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"Zest for Life" is the name of St. Francis Hospital's new educational series aimed at motivating the public to prevent heart disease. In addition to medical experts, the free series features interesting personalities who exemplify that a "Zest for Life" can help prevent heart attacks. Grummanite Ritchie Cope, who marks his fifth year as a heart transplant recipient this fall, was a speaker at the first session April 9.

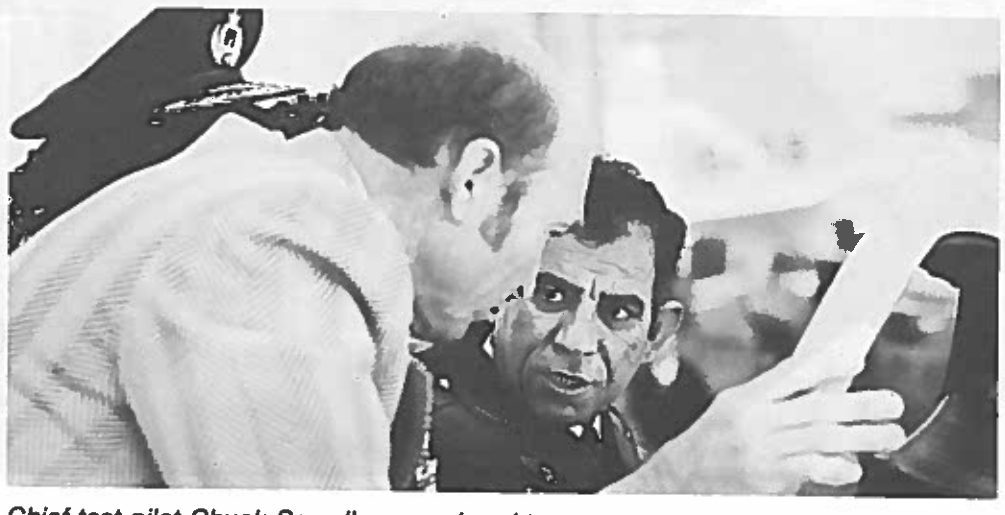
Tomcat on display

Although the first of 80 Grumman F-14As purchased by Iran will not arrive in that country until early next year, activity in preparation for that big event is becoming more and more evident throughout Grumman Aerospace. Just recently, on Tuesday and Wednesday, April 8-9, Maj. General Sayed Javadi, F-14A Program Manager for the Imperial Iranian Air Force, came to Long Island with five Iranians associated with the program to meet with Board Chairman Joe Gavin, President George Skurla, and other corporate officers and representatives for a status review on the F-14A and a tour of production facilities at Bethpage, Calverton, and Great River.

Accompanying General Javadi were Colonel Mohammed Ghanipour, IIAF Liaison with Naval Air Systems Command; Lt. Colonel Sanavi Temadoon, Maintenance and Material; Capt. Hassan Bayzaii, Training; 1st Lieutenant Amir Fariar, Avionics; and Machour Shyegan, Civil Engineering. Also with the group were Lt. Colonel Tom McNutt, Military Assistance Advisory Group, Teheran; Rich Stepler, Naval Air Systems Command; and Lt. Cdr. Jim Haley, Naval Air Systems Command.

While touring Plant 4, General Javadi took a 45-minute hop in the F-14 Operational Flight Trainer, piloting the "plane" through an extensive flight regime that included practice take-offs and landings and low- and high-speed maneuvers. Another area that proved of interest to the general was Plant 39; Iranian air crews will begin systems training in the facility next month.

Following their Long Island stopover, General Javadi and his associates visited the carrier John F. Kennedy off Jacksonville. General Javadi had a back-seat ride in an F-14, and, according to reports, went through its entire envelope. The general surprised pilot Lt. Cdr. Steve Husak of VF-32 by presenting him with his own IIAF wings, which have more than 6,000 hours on them. At Patuxent River, Md., General Javadi was scheduled for another back-seat ride in the F-14.



Chief test pilot Chuck Sewell was on hand to answer any queries from the general, shown here getting the feel of F-14 cockpit at Calverton.

Production supervisor Sam Knight got the opportunity to escort General Javadi during tour of F-14 manufacturing facility at Plant 1.

F-14 Iran Program manager John Coursen is discussing some production features of Tomcat with 1st Lt. Amir Fariar of Imperial Iranian Air Force. Lt. Fariar is avionics specialist for IIAF on the F-14 project.

Letter of acceptance. Capt. Richard Wilson, Naval Plant Representative at Bethpage, presents President George Skurla with framed copy of letter of acceptance of Grumman's validation system for the F-14.

Tri-services okay our system of performance measurement

One of the responsibilities of a defense contractor is keeping the customer informed. The Department of Defense requirements for this have been spelled out in DOD Instruction 7000.2 which calls for a performance measurement system to plan and measure work progress; provide reports which relate cost, schedule and technical performance; provide data which is timely and auditable; and provide government managers with reports consistent with internal management data.

Grumman has just finished the validation process for the production segment of the F-14 program, the first company program to come under the government requirements. The government officially gave its stamp of approval in the form of a letter of acceptance last month, signifying, according to Bob Myers, deputy director of Planning, Control and Budgets, that "the company has achieved a validated system that will be usable for the production end of subsequent DOD programs." And not just for the Navy, he points out, though that was the extent of the original commitment to the government.

"From the beginning, Grumman's intent was to go 'whole hog,'" says Myers, "and to gain not just Navy acceptance of the validated system but also tri-service (Navy, Air Force, Army) approval." In the spring of 1973 Grumman put together a 25-member team composed of people from manufacturing, engineering, and procurement, and headed by Tony Biegen, manager, Performance Measurement.

This team paved the way for the tri-service's four reviews of the system, beginning in December 1973 with an initial three-day review at Grumman and concluding with the final review in October of last year. And Grumman has already started developing a companion validated system for research and development work for the EF-111A contract that will complement the production system already approved.

According to Myers, "The performance measurement system has been of great benefit to Grumman in the F-14 program over the last year-and-a-half and should prove a major asset in future contracts with DOD, since we now have a demonstrated management control system that DOD understands and has approved."

They're honored

Shuttle Wing engineers Ernie Ranalli and Harold Sanders were the first in that project to be cited for contributions to NASA's Technology Utilization Program. In recognition for their New Technology Award for the submission, "Fiberglass Zee for Honeycomb End Closure," the two men were presented with a Grumman pen and pencil set. ... Edward Conroy of Operations Analysis and Planning Research, Plant 5, was saluted recently by C.W. Post as its recipient of the Henry J. Plock Prize for 1974. Conroy, who completed his master's degree with a perfect 4.0 average, was honored for his achievement with the Henry J. Plock Prize, awarded annually by C.W. Post Center to the graduate student who has demonstrated exceptional scholastic ability and who has made contributions to engineering and science.

Time to sign up

The Annual Meeting of Grumman Shareholders is scheduled for 2 p.m. on Thursday, May 15, in Hangar 3, Plant 4. Starting April 15, Bankers Trust Company — Trustee for the Grumman Employee Investment Plan — began mailing to members of the Plan proxy statements and confidential cards for voting at the Annual Meeting, says Bob Bradshaw, Grumman Corporation Secretary. Employees are asked to return the completed cards by May 7 to Bankers Trust Company in the self-addressed, postage-paid envelopes that will accompany the proxy statements.

The Annual Meeting is often the only opportunity visiting Shareholders have to see the Company's products. Because Grumman stock obtained through the Investment Plan is held in trust for each individual member, membership in the Plan does not automatically entitle participants to attend the Annual Meeting, says Bradshaw. Only those persons owning stock of record — that is, stock purchased outside the Investment Plan before the record date of March 28 — are eligible to attend.

Grumman personnel who own Company stock as of the record date, March 28, 1975, and who wish to attend the meeting should pre-register at any Employee Services Office on any working day before May 14. (Proxy cards should, of course, be mailed in the return envelope provided.)

Because of limited space at the meeting, Shareholders are requested to refrain from inviting their spouses, children, or friends to the Annual Meeting.

OAO to monitor ozone layer

The Orbiting Astronomical Observatory, OAO-3 Copernicus, which recently marked two-and-a-half years in orbit, is getting another job to do. As of February 21, the space vehicle built by Grumman Aerospace had made 13,000 earth-orbits, covering 367,894,491.6 miles, and had been available for observation work 98 percent of that time to conduct Princeton University and University of London experiment packages concentrating on ultra-violet and X-ray studies.

On April 1, NASA announced that Copernicus will be used to monitor what effect, if any, freon gases from spray cans and refrigeration systems have on the ozone layer of the earth's atmosphere. The ozone atmospheric layer, by acting as a filtering agent, protects the earth against lethal ultra-violet rays of the sun.

Through the use of the Grumman-produced satellite, Dr. Guenter R. Riegler of the Bendix Aerospace Systems Division will be able to observe the extent to which ultra-violet light from a distant star, as it traverses the stratosphere, is absorbed at wavelengths characteristic of chlorine. It has been suggested by some authorities that chlorine released by the breakdown of freon in the stratosphere acts to deplete the ozone.

By observing the star at different points in the sky, Dr. Riegler will determine the amount of chlorine absorption occurring at the star itself; further observations of the star as its light traverses the stratosphere will then indicate any additional chlorine that is absorbed along that path.

According to the NASA announcement, it should be possible in this way over an extended period of time to monitor any ominous increase in stratospheric chlorine more accurately than previously possible. Such observations have been done from balloons scanning the sun at infrared wavelengths — but in such investigations, presence of water vapor introduces an element of uncertainty.

Offer cash awards for college papers

College students who are interested in the field of production and inventory control can get a cash return from the American Production and Inventory Control Society, which is conducting an international student awards program for papers submitted on the subject. Entry deadline is May 30, 1975. According to Norm Heilweil, manager of Systems Procedures and Training for Material Management, the top three winning papers at a regional level will receive $150, $100, and $50, respectively, and will be entered in national competition which could bring up to $500, $300, and $200 for the highest three papers, with an equal amount to the academic institution represented by the winners.

For further information, please contact Heilweil, who is director of education for the society, at 41 Knott Drive, Glen Cove, N.Y. 11542.

Better ideas earning big bond paybacks

"You gotta believe" is a well known — and well worn — popular slogan. But at Grumman, the number of people who believe in suggesting a better way to do their jobs is growing all the time.

For the month of March, nearly 150 employees were cited as suggestion winners. These industrious Grummanites earned for themselves a share of the $33,225 in U.S. Savings Bonds (face value) awarded through the Motivational Program Office. At the same time they played a personal part in cutting time and costs on many of the company's programs.

It is interesting to note that 13 "idea" people found themselves at the top of the list with bond awards totaling over $1,000. Not bad for suggesting a better way to perform your job.

It's not unusual for three people to share an employee suggestion award, but it is a little surprising when they work on different shifts yet wind up hitting the big jackpot award of the month with $1,800 in U.S. Savings Bonds (face value).

The top trio all hail from Plant 1 Final Assembly: Bill Rosenburg, John Covais, and Jerry Stencil. Bill and John work together on the night shift, and Jerry works days.

As Bill describes their suggestion: "It's a relatively logical and simple idea ... but it works — and it saves time and money."

Previously, a series of F-14 hydraulic lines were manufactured tested, inspected, handled, and processed in the paperwork as two separate lines. Final assembly required the expensive cryofit fittings be installed which the trio reviewed as unnecessary manhours. They suggested that these two-piece hydraulic lines be manufactured as one — thereby eliminating the "double" manufacturing and the rising cost of installing cryofits. The manhours not only were reduced drastically, but the production flow time improved, too.

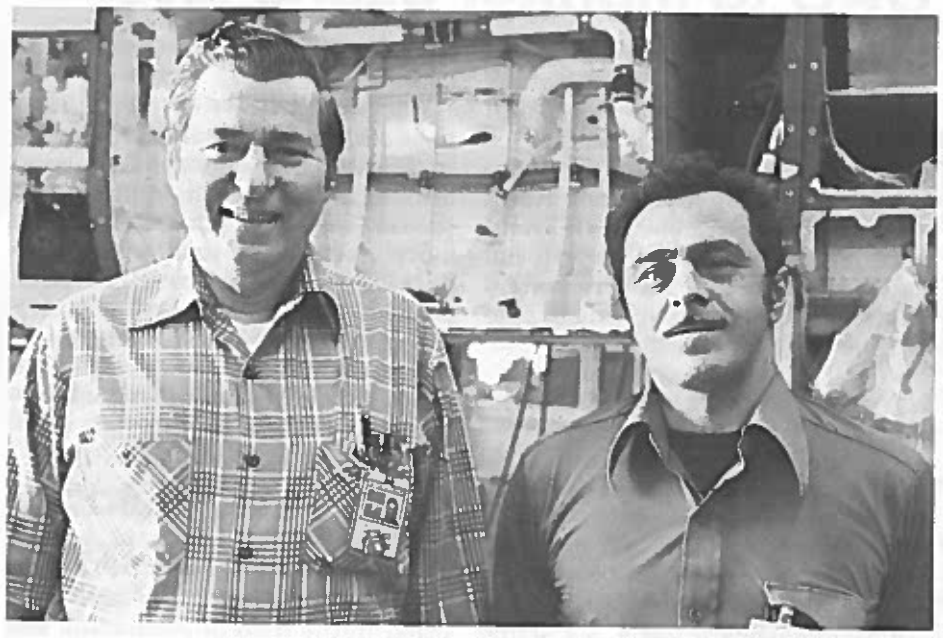
This marks the "10th or 11th" suggestion award for 9-year-man Jerry Stencil — but this is the first big bond return he has earned. Jerry is no stranger to the F-14 program, having helped assemble Tomcat number one at Calverton. He finds that suggesting a better way reaps more benefits that you realize.

"You not only make your job and others' jobs a little less time consuming and easier, but you also knock off a little more money on the F-14 price tag. It's obvious that the less costly the F-14 is when it flies over the fence, the more money for the company and the more stable your job becomes."

What does he plan on doing with his latest bond award? "My children's television went on the blink and I think I'll buy a new one for the family." Now that's what you might call going on record.

Bill Rosenberg has spent the past 23 years at Grumman working the night shift. Currently a night foreman, he has submitted a few suggestions in his career, but this is the first time it has paid off in bonds. He plans on putting his share of the top bond award toward building a well on his upstate property where he spends his off-hours snowmobiling and hunting.

Co-worker John Covais is the reluctant winner of the top award trio. Since the announcement of his suggestion award he has "more friends than ever." As John sees it, "Everyone thinks I'm a very rich friend now." John, who has been at Grumman for eight years, isn't the only Covais at Grumman. His wife Rose and sons, John Jr. and Lenny, are also part of the Grumman family.



Top trio. Bill Rosenburg (L), John Covais, and Jerry Stencil (far right) submitted an employee suggestion that saved time and cut costs on the F-14 final assembly line in Plant 1. For their idea, they were awarded $1,800.

Across-the-board view

From Joe Cavola's position as keyman in Honeycomb Bonding, Plant 3, he can view a variety of Grumman's programs, including B-1 stabilizer, EA-6B, and F-14. "I call it my across-the-board view," says the 18-year veteran. "When I find a better way to perform my job on the F-14 program, I always try and see if I can transfer the basic idea to another program."

Joe is no novice when it comes to suggesting a better way. His past awards were for $1,025, $1,000, and $2,000, and his latest bond award is for $1,500. And this top idea man has seven more suggestions on the approval route.

Joe's latest "cash-in" suggestion not only saves the company money but also eliminates use of inflammable material — significantly reducing the potential for accidents during honeycomb bonding, which could be damaging to the material. He recommended that carbon dioxide gas be eliminated in its use of forming an inert atmosphere in the autoclave during low-pressure bonding. He suggested that a new silicone bag on the market be used in its place. Spiraling upward prices and the short supply of carbon dioxide gas makes this idea profitable — and for the past 10 months there have been no accidents, either.

What does he plan on doing with his additional windfall? "It will just keep company with my other bonds in the strong box in the vault," he quips.

Charles "Skip" Skippon was getting fed up with sub-replacement assemblies (SRA's) becoming damaged when they were removed from an F-14 avionics box. The only feasible way to remove the SRA's was by wiggling or prying with a screw driver, which resulted many times in damage to the SRA and/or the interface device connectors.

This cost the company an average of 50 manhours per week for repair and replacement. The only solution Skip saw was to build and design his own special tool to extract the SRA. He did just that and now his extraction tool is being employed in

(Continued on page 5)

Joseph Cavola

Charles Skippon

Frank Rattinger

'Hydrofoils . . . one way to increase productivity without increasing costs'

Starting in early November of last year, the U.S. Coast Guard began a three-month evaluation of the hydrofoil boat Flagstaff as part of its continuing search for advanced high-speed vessels. The 73-foot long, 67-ton Flagstaff was designed and built by Grumman for the U.S. Navy in the late Sixties, and was loaned to the Coast Guard for their operational evaluation of the hydrofoil concept as compared with present Coast Guard cutters investigating such areas as high speed, sea-keeping ability, and manning requirements. Recently, *GRUMMAN PLANE NEWS* interviewed Rear Admiral Abe H. Siemens, Chief of the Office of Research and Development for the Coast Guard, about the Flagstaff evaluation and the expanding mission responsibilities of the Coast Guard. That interview follows.

Plane News: When did the Coast Guard become interested in developing high-performance watercraft?

Adm. Siemens: Our former Commandant, Adm. Bender, saw the rapid changes in legislation which resulted in the Coast Guard getting more and more new tasks. The first of these recent new laws, of course, was the Federal Water-pollution Control Act, which got us into the oil and environmental protection business — the oil-catastrophe response capability. And, shortly after that, came the Ports and Waterways Safety Act, in 1970; that got us into the business of controlling traffic in harbors to minimize collisions and the resulting pollution, fires, and damage. Just recently, legislation was enacted on the Deepwater Ports Act. Again, because it is off-shore, it will get the Coast Guard into setting the standards — the operation, construction, and safety of an off-shore port. The reason for an off-shore port is

that the super tankers of today are too big to come into our existing harbors. New York harbor is a beautiful harbor, but it is limited by depth of water. It's very apparent that commerce has to continue, and a big part of commerce is oil. And how is it going to come in? It has to come in by ship. The ships that carry the bulk of imported oil are mostly super tankers, so, again, that's the reason for the off-shore port legislation. When Congress looked at *who* can do *what* in the off-shore area amongst several Federal agencies, it chose the Coast Guard. The Coast Guard has the off-shore mobility, the technically trained personnel, and it is able to respond in a very quick time to whatever emergencies or contingencies that develop.

PN: Is the Coast Guard involved in the present controversy on liquified natural gas?

AS: Yes, although we don't view it as a controversy; we view liquified natural gas as another product which is imported. It's energy, just like oil. We need energy, so liquified natural gas is going to come into the country. It's the Coast Guard's job to make sure it comes into the country in as safe a manner as possible, and that all elements of the importing operation are safe — the ship's arrival and docking at the shore facility, the transfer of cargo, and the shore facility itself. All are concerns of the Coast Guard. What I'm saying, essentially, is that we're very interested in safety. That's our business, so we might provide escort for certain categories of hazardous cargo ships. Adm. Benkert, who is in charge of our marine safety office, has stated many times that liquified natural gas is only one of many hazardous cargoes.

Gasoline is another hazardous product. But there aren't many people who get upset about gasoline importation. So the Coast Guard broadly categorizes these cargoes as hazardous, and all hazardous cargoes get the same meticulous, methodical approach to safe traffic.

Getting farther off-shore, at The Law of The Sea Conference, the delegates have been talking about a 200-mile, off-shore economic zone. The

commercial fishing business has helped focus attention on that problem. U.S. fishermen are concerned that foreign fishing fleets will take, what we consider, all of our fish, and the Ecuadorians are reacting the same way toward our own San Diego fishermen. Ultimately, there's going to be an international agreement as to what constitutes national economic boundaries. There are a lot of difficulties in that type of arrangement, however. We envision some kind of an extended off-shore area of U.S. interests that will be recognized by foreign countries. It would be an area in which they could fish, but only with our permission. And the Coast Guard, which acts as the United States' enforcing agency, will then license or authorize fishing within the context of the international agreement.

But if you can't check on these activities, then you have no way of knowing if the rules or procedures are being followed. Therefore, Admiral Siler, our Commandant, has gone on record with the Congress that we will require additional resources to do the necessary patrolling. We have a certain number of ships, and we have aircraft and helicopters. One of the natural marriages that we see taking place is between the helicopter and the ship. Presently our ships operate without a helicopter onboard, but we will be getting more helicopters in our inventory and putting them onboard, like a lifeboat.

PN: You mentioned Congress. Has your budget increased or decreased in the last couple of years?

AS: The Coast Guard budget has crept up incrementally, almost reflecting the increase in the cost of living. But Fiscal Year 1976 is the first year that the President's budget has included a sizeable increase in our procurement budget. We formerly had a ceiling of about $100 million, and we've been limited to that $100-million procurement ceiling for about 10 or 15 years. This is the first Coast Guard budget that has been significantly above $100 million for procurement — it's on the order of $165 million — so it's a departure from a previous ceiling on the procurement line. Admiral Siler, our Commandant, envisions our off-shore enforcement in this manner: we would have aerial patrols to check on the locations and the numbers of ships and the type of fishing going on. By using high-resolution cameras, we can determine what kind of fish are being taken, the size of the nets, etc. The aircraft, by knowing its own position, would also know if the foreign fishing vessels were outside or inside the authorized zone. Upon discovery of a violation, it would be the Coast Guard's responsibility to put a boarding party — by means of a ship or a boat — on the scene.

In our operating concept, we'd have what we call a "pounce craft" — something to get us out there in a hurry after the aircraft radioed that such a violation had occurred. The surface craft would go to the scene and make an arrest if it were a U.S. vessel, or collect the evidence and pass it on to the foreign nation whose vessel had been in violation. That is our concept of the patrol activity. The procurements that our Commandant has stated would be necessary would be six long-range aircraft, which are similar to the C-130, four medium-range aircraft, 10 additional helicopters, and six additional ships which would be reactivated. We have six high-endurance cutters presently laid up in mothballs, which would be reactivated together with helicopters. That would set up the basic patrol configuration. Our interest in the high-performance watercraft stems from the need to get out there in a hurry to make an arrest after we have discovered the evidence of violations by air. We became aware of the Navy having hydrofoil boats available for loan, so we proceeded to make arrangements to borrow Flagstaff and High Point.

PN: Have you been able to analyze the results of the operational evaluation on the Flagstaff?

AS: Yes, partially. From our own Coast Guard crew's having run the boat, we have certainly gained very valuable experience, both in terms of operating at the higher speeds, operating a different type of craft, and operating a different type of power plant. We were very pleased with our own personnel's operation of the boat. Previously, we had put some Coast Guard officers aboard a Navy operated hydrofoil to learn how it ran, what it's advantages were, etc. Although we had some favorable reports from that operation, we recognized the value of doing it ourselves, with our own people operating the hydrofoil and against our own missions. I was pleasantly surprised to see that our operating crew could make minor

repairs in the course of the several months test program, and that, essentially, the boat was self-maintained, self-repaired and operated, with a high degree of professionalism. We are now shifting to another configuration hydrofoil boat, the High Point, and we'll start operating that in April and May out of San Francisco.

PN: Would you elaborate on some of the features of a hydrofoil boat that attracted you to that type of craft?

AS: I think the most attractive feature is speed; and the fact that you can maintain that speed in fairly heavy seas makes it an even more attractive feature. The speed divergence becomes greater with increasing sea state — the rougher the sea, the slower a conventional boat will go, but a hydrofoil can maintain its speed within its wave-height limit. Say you compare the speed of a hydrofoil boat, about 45 knots, with the speed of a conventional boat, about 25 knots. That may not seem sufficiently advantageous. As the weather gets rougher, however, you can maintain 45 knots with the hydrofoil but the conventional boat may slow down to 10 knots. Then you have a 4½-time speed factor between the two. In addition to the speed advantage, you have a crew-comfort factor. Crew comfort and fatigue is something that has a bearing on crew performance. In a search-and-rescue mission — which is often like looking for a needle in a haystack — crew performance is vital. I was pleased in riding the Flagstaff myself to observe that it provided a better search platform than a conventional boat because it rides higher out of the water. And since it doesn't roll while it's on the foils, it's a stable platform; it permits more accurate observation either by visible means or by radar. Those are some of the key advantages. The other big advantages I see for a hydrofoil-type boat is that it can get out a good distance off-shore in a reasonably short time, and then get on its hull and loiter if necessary. A helicopter can't do that. It can get out in a hurry but it can't loiter very long because of its fuel limitations.

PN: What response has there been from the crew as individuals? How do they like operating Flagstaff?

AS: Our crew has been very enthusiastic about the boat, and that stems from their being able to depart a harbor quicker and get on the scene quicker. The problem with leaving a harbor at high speed in a conventional boat is that you create a wake, and that in turn can cause damage at the marinas and the shoreside itself. There's a tremendous advantage in departing right from the dock at full-speed; we can do that with a hydrofoil in confined waters but can't with a conventional boat.

PN: Would you outline the full scope of missions and responsibilities of the Coast Guard?

AS: The Coast Guard has a mixed bag of missions and it's fortunate that the types of responsibilities are all compatible with common equipment. We have the search-and-rescue business, which requires responding quickly to vessels or persons in distress, and that requires ships, boats, helicopters, and fixed-wing aircraft. Our patrolling for marine environmental-protection — oil spills, for example — requires aerial surveillance and surface response. Our port safety mission includes all elements of harbor safety, whether it involves a marine accident or waterfront facilities. So we're concerned with safe traffic in the harbor, safe dockside facilities, and, again, we'll respond to any kind of a harbor fire or catastrophe. We maintain the aids-to-navigation system — floating buoys, lighthouses, and an electronic navigation system. From an operational standpoint, this requires ships, boats, and, presently, we're thinking about aerial surveillance for a check of the position of aids. Aerial surveillance of a buoy, for instance, could determine if it's still in position following a hurricane or ship traffic which might knock a buoy out of position. With some of the equipment we have today we can make one flight over the harbor and have all the buoys recorded on film. The film can be overlaid on a chart, and we can then say, convincingly, that all of our buoys are on station. That will be very helpful to ship traffic, especially under conditions which I described.

Icebreaking in polar regions is another of our missions. All of these missions, you'll notice, are marine oriented and require a marine or an off-shore mobility, by air or by surface. So the Commandant has enunciated the policy that all of our Coast Guard resources will be multi-mission adaptable ... so if we're not responding to someone in distress, we can make a patrol on environmental protection, or we can check on our aids-to-navigation, or some other function. They're all wrapped up in the marine off-shore picture.

PN: Are you using communications satellites for such missions?

AS: We have a project that is satellite-related in terms of communications. Communications, of course, is a big part of Coast Guard command and control of our own vessels and also relates to vessels in distress. We have an automated merchant-vessel reporting system, which we call AMVER, in which ships transiting the Atlantic give their position, course, and speed, and this is kept in a computer in New York. If any one of

these ships gets into trouble, the Coast Guard can immediately produce a printout of the nearest ships to that location and vector them to the distress scene. Of course, satellite technology, besides providing us with a communications link, could also give us a surveillance link as well. Satellite surveillance of the polar region could be very helpful in selecting optimum ship-routing for our icebreakers. But we believe we can get a better feel for a given situation from an aircraft because you can program an aircraft much easier than a satellite and you can position it where you want it. You can also install the best type of sensor on an aircraft that is most suitable for the mission. At present, we are experimenting with a radar system that will measure ice thickness down to a few inches. It's a marvelous thing because an aircraft with this radar flying in advance of an icebreaker could indicate to the ship where the thinnest ice is. This may be possible with satellites, but it's more difficult; once a satellite is in place, you can't change the onboard sensors.

PN: What impact would a 200-mile economic zone have on your future requirements for a high-speed watercraft?

AS: I think a 200-mile limit would accentuate the Coast Guard's need for high-performance craft. As I mentioned earlier, the Coast Guard is an old line organization in boating. We've been in the marine business since 1790, and, initially, our whole history was based on small boats. Since then, of course, we've branched out into other duties. We still have a large investment in lifeboat stations around the country, and these lifeboats are primarily equipped as conventional boats. The introduction of high-performance watercraft may very well be in conjunction with a new mission: enforcement of a 200-mile economic zone. I'm not suggesting that we would not utilize conventional forces in this 200-mile zone. Ships, helicopters, and aircraft would be employed as well. Because the Coast Guard is always buying boats and continually replacing boats, I see the introduction of high-performance craft included in some of the boats we will be buying in the future.

PN: You mentioned that the crew is going to run an operational evaluation on Boeing's High Point. Will that evaluation be pretty much the same as the one on Flagstaff?

AS: Pretty much the same, except in a different geographic area. Because it's a different area, we expect a different sea environment off San Francisco, slightly rougher seas than we encountered off of San Diego. High Point is a different configuration boat — it is a longer boat, about 115 feet in length, and it has some additional features by virtue of its different design. We picked San Francisco so that the evaluation could be conducted closer to some commercial fishing areas. We haven't been able to get a good evaluation in the fishing enforcement business off of San Diego but there's a little better opportunity for that off of San Francisco; there's an even better opportunity for that off of Cape Cod. Before the Coast Guard is convinced of the advantages of high-performance watercraft, I believe we're going to have to demonstrate what we're learning on the west coast off the east coast as well.

PN: Does any foreign government employ hydrofoils for the same type of missions as the Coast Guard?

AS: I'm not aware if they use hydrofoils, but there are several foreign governments that are very interested in forming their own coast guard. They see a value in having a marine patrol that is not affiliated with their own defense forces, and which can perform the same type of missions as the U.S. Coast Guard does. Many of these countries' personnel have been visiting the United States, visiting us here at Headquarters about what we do, and from that I presume they are formulating plans for their own coast guard. Generally, this would involve, as the number one starter, boats.

PN: Isn't it true that the Coast Guard is also interested in buying a new type of aircraft as well? Will it be an "off-the-shelf" item?

AS: Yes, we have in our current budget plans for procuring twin-jet aircraft, and we're looking at aircraft which are currently in the marketplace in a weight range from 22,000 up to 65,000 pounds. That budget is presently before Congress. We're looking more and more at teamwork between different Coast Guard resources. Teamwork between a helicopter and a ship, where the helicopter is part of the ship, is a natural; teamwork between a ship and a fixed-wing aircraft is something else we'll be doing more of. We're pursuing teamwork concepts between any airborne unit, whether it's aircraft or helicopter, and any surface unit, whether it's ship or boat. Air-surface teamwork is something that's becoming more and more a part of our daily operations.

PN: Would you tell us about your Research and Development Center at Groton, Conn?

AS: Our R&D Center is housed on former Coast

Guard property that is now the University of Connecticut's southeastern campus, and we lease space for our small contingent of 100-105 military and civilian personnel. This particular laboratory is for in-house, hands-on experimentation in areas which will be of continual interest to the Coast Guard. For example, they are doing work in our aids-to-navigation research — buoys, lights, power supplies, solar panels, wind power (as generated with air turbines by the heave of the buoy), as well as chemical analysis. The R&D center has developed and, I believe, is the leader in the country and in the world in "fingerprinting" oil spills. By fingerprinting I mean establishing beyond a shadow of a doubt that a specific oil spill came from one — and only one — source, so that we can eliminate other possible sources. By sources I mean ships or shore stations. If there's an oil spill on the water, we send a boat out to get a sample. Then the crew looks around to see where this oil might have come from, and then checks these sources. One of these sources will match, like a fingerprint, with the oil that's taken off the water. And this match is so good that we have a 99% confidence level in it, and that it will stand up in court. With this capability we have been able to get people who have been responsible for spillages to admit that and pay the clean-up cost. It becomes really important in identifying the source because the person or the facility responsible for the spill is responsible for the clean up, and clean-up costs can be quite high. Very recently in Philadelphia, a ship which had previously disavowed any responsibility was identified as the source of an oil spill. It resulted in clean-up costs of $80,000 being picked up and paid by the ship's owner. Perhaps the ship didn't know at the time that we had the ability to fingerprint and invited our Coast Guard men to come aboard and take samples. After we took samples we could then say: "It came out of your No. 3 tank; here's the match."

PN: What is the range of R&D work at the center?

AS: The R&D center does work in physics and optics, chemistry, acoustics, power sources, and electronic systems. The center was the one we tasked to put together the test plan for the hydrofoil boat evaluation, and one officer from the R&D center is with our hydrofoil operation.

PN: Have you been able to analyze test results to make any determination on how the Flagstaff could operate in one of your real-world environments?

AS: We haven't got a report on that but we have contracted for an independent study from the Center for Naval Analysis. They are doing systems analysis for us in terms of our Coast Guard missions, utilizing high-performance craft in the operational mode that I've indicated, either against the conventional boat or as part of the team. Previously, we felt that speed of response by water wasn't too important since we have helicopters that can get there much more quickly. However, one of the things that we learned in our Flagstaff operation was that even though a helicopter can get on a scene more quickly, as happened in a search-and-rescue case off of Los Angeles, the helicopter is not as good a search platform as a boat at night, over water. The particular case I'm referring to resulted in the saving of three lives by the Flagstaff, which arrived within about an hour after it was dispatched from Long Beach. So, I think this particular case pointed out that although you can get to the scene in a hurry in a helicopter, you're not as effective in a night search as you are in a boat once you get there.

PN: You said you were surprised to find the Flagstaff rode so easily and comfortably?

AS: Yes, there have been a lot of hydrofoil operations with different foil configurations than the submerged foil system used on Flagstaff. Some people who have been to Europe and have ridden on these surface-piercing foils invariably come back and say that hydrofoil boats will knock your teeth out. That kind of a hydrofoil probably will in rough seas because it's absolutely equivalent to a planing hull. A planing hull at high speed in a high-sea state is going to bang your bottom. A hydrofoil boat with totally submerged foils, in a similar sea-state, is going to be smooth as silk. So, the ride quality cannot be compared between two different types of hydrofoils. The surface-piercing foils, of course, have application in protected waters and in harbors. The submerged foil — which is what the modern hydrofoils are — are of different construction, different concept, and they permit a smoother ride, even in rough seas, within their design envelope.

PN: The hydrofoil is only one of a group of high-performance craft you're evaluating though, isn't it?

AS: Yes, it is. Previously, we have operated an air-cushion vehicle which has a speed advantage

over a hydrofoil craft in calm seas but has a speed disadvantage in rough seas. So, if you take the combination of smooth seas and rough seas, the hydrofoil has the advantage for a given size. To fully maintain the speed advantage of an air-cushion vehicle, you have to get into a fairly large size before you can overcome that rough-water speed retardation. On balance, for the majority of times in Coast Guard missions, at least, the hydrofoil has significant advantages over the air-cushion vehicle of equivalent size.

PN: Would you comment on the size of a hydrofoil crew as compared to that of a conventional boat?

AS: One of the things the Coast Guard is becoming increasingly concerned with is operating costs, and the more people we have on a boat, for example, the higher the operating cost. So, the smaller the crew the lower the cost, and that's the way we'll most likely go. In terms of a high-performance craft and a larger ship, I can see where a high-performance watercraft can perform many of the functions of a larger ship at lesser cost. This is something I hope we can get out of our systems analysis study presently going on.

PN: You're expecting procurement increases in the next few years; are you also planning on increasing the total number of people in the Coast Guard?

AS: One of the popular words of today is "productivity;" and, of course, the Coast Guard has always considered itself to be very pragmatic about productivity. Unless we can get a payoff on something, we won't buy it. We are getting new duties, and it is often easier to get new equipments as opposed to getting more people. And if there is any way that we can perform a job with fewer people, or perform more jobs with the same number of people, that will be desirable from a productivity aspect. We can't just say we'll need so many more boats and that each boat will take so many men, and that we'll continue to operate in precisely the same way we always have. In addition, something I've been pointing out to our own people, as we get new equipments we have to incorporate new operating concepts. The new concepts with the new equipment should make for a better overall performance and more productivity per man, per unit, and for the Coast Guard as a whole.

PN: Why do you refer to Coast Guard personnel as being military personnel when for a long time the Coast Guard was attached to the Department of the Treasury, and now you're part of the Department of Transportation?

AS: Yes, we're military. The reason for the military organization is that in time of war we operate with and as part of the Navy. Should the President transfer the functions of the Coast Guard from Transportation to Defense, we would become a full operating arm of the Navy. Our communications, our ships, our training are very comparable to the Navy. Where we divert from the Navy is that, in addition to any military requirements that might be assigned to us, we have a full bag of civilian-duty functions. And that, by the way, is why a lot of foreign governments are very interested in a Coast Guard-style operation. They feel they cannot afford both a big navy which has to be adequate for wartime and an additional force to engage in the type of civilian functions that the Coast Guard has. They see a very logical compromise in establishing a coast guard which would be civilian oriented in peacetime, yet, when necessary, be able to strap on the weapon systems for war.

PN: As part of your selection process for a new boat, do you consider how a hydrofoil would be adaptable in time of war?

AS: In selecting new craft procurement, we determine that the craft will meet some basic operational requirements, and these will be primarily the determinants of the selection. However, we also realize that military requirements are something we cannot neglect ... therefore, the craft that performs the peacetime functions very well and has additional advantages in the military line would score higher marks in the evaluation. I should point out that although we are currently looking at boats as part of the possible international move to a 200-mile, off-shore economic zone, we are certainly conscious of the fact that the U.S. has tremendous resources presently in place off-shore — more specifically, the oil wells and platforms in the Gulf of Mexico. Federal authorities are trying to decide which agency should be tasked as responsible for the defense of those resources, and it appears likely that the Coast Guard will be the agency that the Federal government would task with the defense of off-shore assets. Although this problem has never arisen before, the present oil crisis brought into focus the vital question as to who should protect off-shore assets. It's a natural for the Coast Guard to do so ... and should we be given this additional role in the future, then there would be an even greater requirement, not only for a high-performance watercraft, but a craft with some additional defensive capability as well.

PN: Was the operational evaluation of Flagstaff that took place off the west coast considered a successful project?

AS: Yes. I was most pleased with the Flagstaff operation because we did achieve a very high operating ratio. We had very minor difficulties. As you know, we hit a whale but the damage to the boat was less than might have been anticipated. As both a sea-going man and an aviator, I recognize that ships do run aground and planes do crash. Essentially, this turned out to be a crash, and I think the fact that the damage was as minor as it was for striking a large submerged object reflects very favorably on the structural design of the boat. Frankly, I think that the whale incident, if anything, has increased our confidence in hydrofoil-type operations for general use. What impressed me, aside from the fact that the boat came out of the whale collision quite nicely, is that we got the boat back into operation within about two-and-a-half weeks of repair time, which is very rapid repair time from what can be considered a major casualty. Our own crew — I think we had a Navy chief on board during the repair period — but essentially our own operating crew effected repairs on the boat.

PN: As a result of the operational evaluation, have you been able to determine how long it would take to train a crew, with no previous hydrofoil experience, to proficiently operate and maintain a boat like Flagstaff?

AS: I was pleased that we could get a crew trained and up-to-speed on Flagstaff in a short time. Essentially, if we have a boat crew that is qualified in one kind of a boat operation, the transition to hydrofoil shouldn't be any great hurdle. I think we've demonstrated that with our crew on Flagstaff.

PN: What kind of future do you see for hydrofoils within the Coast Guard?

AS: Personally, I see a bright future for hydrofoils. Without emphasizing the fact that the boat is hydrofoil or not, I think that productivity is something the Coast Guard is after, and however we achieve that productivity, it's going to come about. Hydrofoils, I believe, are one way for us to increase our productivity without increasing our costs. One final thing I should mention in terms of costs is that there is a growing shift within the Federal government to look at costs in terms of their life-cycle cost rather than their initial acquisition cost. In the past, we have usually opted for the lower-acquisition cost and not taken into full account the operating costs. It's now come to the point where higher acquisition costs that result in lower operating costs and lower life-cycle costs will be the determining factor in the selection process.

PN: When you say productivity, do you mean cost-effectiveness?

AS: Yes, I mean cost-effectiveness — the most miles patrolled, the most missions accomplished, per dollar, per person, per unit. That, essentially, is the basis of the systems analysis study we have in process. And as these numbers come out of the study in comparing different options for doing things, it will show, I think, that one of the lower-cost ways will very likely include hydrofoils.

Rear Admiral Siemens was commissioned in June 1945 upon graduation from the Coast Guard Academy, and served on Coast Guard cutters in both deck and engineering assignments for four years before applying for flight training. Following completion of Navy flight training in 1951, he served for 20 years in operational aviation assignments at Coast Guard air stations in Florida and Alaska, and aviation engineering assignments at air stations in Mississippi, Hawaii, and North Carolina. He earned his master's degree at the Krannert School of Industrial Management at Purdue University in 1961.

He has commanded the Coast Guard air station at San Diego — while serving there he developed inflight-refueling techniques that allowed helicopters to be refueled from Coast Guard ships — and he also headed the largest Coast Guard base in service, that at Governor's Island in New York. Siemens was selected for Flag rank in January 1973, and in May of that year was assigned as Chief of the Office of Research and Development.

SPECIAL SUPPLEMENT

GRUMMAN plane news

APRIL 25, 1975

Art Sirinek

Gerard Kern

Earn big paybacks

(Continued from page 4)

Plant 7 Avionics.

Skip plans on using his $1,500 in bonds for a little house re-decorating while he waits to find out how his other employee suggestions are faring on the approval route.

Over the past few years, Frank Rattinger has been rapidly climbing the suggestion award ladder. He has been awarded bonds of $75, $150, and $200 for suggesting better ways to perform his job. But those awards are a "mere pittance" when compared to his recent award of $1,450 in U.S. Savings Bonds.

What is Frank's winning formula?

"Just having a mind for the obvious," says the Plant 3 Electrical Discharge Machine (EDM) operator. "When I was working on an F-14 machine part I discovered that the kidney shaped holes in the part could very well be casted — and finished off — during the casting process."

It was such a profitable suggestion that these new configurations will be incorporated on the production line, starting with Tomcat number 235.

Since Frank's department heard the news that he hit the idea jackpot "there's been a run on Project Sterling forms." The big money winner says that "This award couldn't have come at a better time; my son is entering college to study law enforcement."

Pre-testing idea

Imagine after installing an F-14 engine you were to find that you had to remove it to replace harness or thermocouple that proved defective! That's what happened in Electrical Installation, Plant 6. Seems that when the checkout of thermocouples was performed *after* engine installation, one out of every four engines had to be removed so that defective thermocouples or harnesses could be repaired or replaced.

Art J. Sirinek, night leadman, suggested that these items be checked *before* engine installation. The result: $1,350 in bonds for Art and the problem of removing and re-installing engines has been eliminated, too.

Why suggest a more economical and time-saving method of performing your job? "Let's face it," says Gerard Kern, leadman in Plant 6 Avionics, "the cheaper and quicker you can make a top quality product, the more profitable the company becomes ... and it certainly is rewarding to work for a company that's making the dollars."

Gerard already has six employee suggestions under his belt, but his latest one of $1,225 far outdistanced his other achievements on the suggestion circuit. He suggested eliminating separate electronic F-14 compass swings by using extender cables so that the testing only has to be done once. The leadman, who has been at Grumman for over 18 years, has plans of putting his idea money toward next year's vacation.

GRUMMAN plane news

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appointments

Ask Frank Leone a question — any question — about production at Plant 6 and invariably the answer will come back at you within seconds. And in those rare instances when Leone doesn't have the information on the tip of his tongue, he has it at his fingertips ... literally. A stack of 3 by 5 cards, crammed full with all sorts of data, can always be found bulging in his shirt pocket.

But Leone is more than a walking encyclopedia. He has a keen knowledge of production and what is needed to make it tick like clockwork. As a homegrown product — he grew up in Queens, and though not yet 50 has more than 30 years' service with the company — Frank brings to his job something more than just an

Frank Leone

amazing knowledge of nuts and bolts, aft and forward modules, schedules and fly dates. He seems to know, almost instinctively, what people and talents are necessary to make corporate production goals a reality.

He has been associated with most of the major aircraft programs at Grumman since the close of World War II, and has served as assembler, pre-flight mechanic, assistant foreman, supervisor, production program manager, plant production manager, deputy plant manager, and, just recently, Leone was named manager of Plant 6 by Frank Messina, who heads Calverton Operations.

If you were to ask Frank what his management philosophy was, he might very well answer, in a word, "People." He looks for people who have the intelligence, technical skills, initiative, understanding, and, probably most important, the willingness to dedicate themselves completely to making things happen, for themselves and for the company. And though he's a stickler for details, he's an innovator as well, and also encourages others to think for themselves and to take on added responsibilities.

With up to 40 planes in production flow at Plant 6, Grumman and our customers have many millions of dollars invested in the operation. Leone is not only responsible for the hardware and the more than 1,500 production people in the plant, he's directly responsible for getting those aircraft out the door each month ... and on time. Loyalty — to family, friends, and company — is a way of life for him. To those who know him, Frank Leone is a one-of-a-kind person. Congratulations.

Among other recent changes in assignments are:

CALVERTON OPERATIONS — Jack Schroeder, acting deputy manager, Plant 6; TECHNICAL OPERATIONS — Frank Bagatta, technical specialist, Test and Verification Plans and Controls, and Benjamin Burns, technical specialist, Integrated Logistic Support Scheduling and Controls, both Program Controls; Michael DeSanto, group head, Administrative Controls, Operations and Controls; John Kirwin, assistant manager, Equipment Technology, F-14 (Navy); Cosimo Palazzo, project leader, Support Systems Requirements (F-14); Irwin Fishberg, project leader, Support Systems Concepts (F-14); Chris Spiros, project leader, Support Systems Implementation (F-14), all three from Support Systems Technology.

MATERIAL MANAGEMENT — Frederick Smith, manager, Stores; Robert Meehan, manager, Stockrooms; Henry Chodkowski, manager, Inventory Records; William Waters, manager, Repair Control; Thomas Haller. manager, Material Management (1); Nathan Anello, manager, Material Management (2); Charles Warren, manager, Material Management (4); Joseph Calandra, manager, Material Management (5 & 14); Albert Bainton Jr., manager, Material Management (27); Richard Smith, manager, Material Management (36), all of Material Control; Robert Kopack, manager, Inventory Planning and Analysis, and Raymond Sentz, manager, Requirements Planning, both of Material Management Planning; Robert Ames, manager, Systems Development; Arthur Fichtner, manager, Systems Planning and Control.

service milestones

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William F. Hejl, Controls (2)
Jacob Friedl, Ordnance (2)
George Tiber, Tool Control (2)

G.W. Harms

R.W. Pettit

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Stephen P. Marchioli, GSE Mech. (2)
Louis Pizzo, Tanks & Ducts (2)
Jacob W. Sichler, Instr. Planning & Control (6)
Charles R. Thomas, Spec. Tools & Meth. (11)
Leslie S. Leiser, Templates (16)
John L. Boriotti, Ship & Spares Consolid. (17)
George J. Kubicke, P/S Qual. Controls (17)
Edward Terribile, Jr., Prod. Ctl.-Parts Ctl. (27)
Edith C. Kerbs, Sec. & Pers. Serv. (28)
George Mancuso, Hydraulics (36)

N. Munzing

A. Slawata

25

Angelo Pomponio, Sub-Assy. Maj. (1)
George P. Mina, Struct. Design (1)
John G. Hoffmann, Parts Paint (3)
Paul F. Langhauser, Veh. Liaison Engg. (3)
Gene W. Harms, Crew Sys. (4)
James W. Potter, Jr., Support Equip. Prod. (5)
Robert W. Pettit, Instr. Test (6)
Nickolas Munzing, Ship & Spares Consolid. (17)
Alex Slawata, Sub-Assy. (27)
Robert L. Houston, Hull Assy. (36)
Joseph P. Armstrong, Mfg. Inspect. (43)

R.L. Houston

J.P. Armstrong

A. Pomponio

G.P. Mina

J.G. Hoffmann

P.F. Langhauser

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Gerard Cudone, Power Plant Des. (1)
Anthony Collura, Jr., Design Engg. Mgmt. & Stf. (1)
Joseph E. Komp, Drop Hammer (2)
Charles W. Merchant, Plant Store (2)
Winslow W. Peters, Fluid & Mech. Tool & Equip. (2)
Elbert T. Lindemann, Spot Weld (3)
Robert W. Clair, Mach. Serv. (3)
James J. Gannon, Trans.-Ops. (3)
Leslie P. Wittenkind, Static & Fatigue Test (5)
Charles B. McLaughlin, Aerodynamic Design (5)
Frank P. Marciniak, Fad. Cntrl. Est./Pricing (5)
Harold J. Hobel, Jr., Maint. Rearrangement (6)
George E. Stolworthy, Repair Control (6)
George R. Petheram, Mech. Support (6)
Theron J. Montoux, Jr., Instr. Sys. Design (6)
James V. Digilio, Maint. Controller (7)
Valentine F. Klein, QC Laboratory (10)
Homer W. Roberts, Plastic/Plaster Tooling (11)
Charles F. Morris, Maint. Rearrangement (12)
William Borruso, Training Sys. (15)
Daniel G. Chalich, Resource (15)
Stephen G. Bellanca, Adv. Space Sys. (25)
John J. Breen, Gen. Commodities (30)
Arthur Berman, Equip. Eng.-Equip./Sel./Ds. En. (30)
Frank J. Gaertner, Financial & Reg. Reports (30)
Mary Tessari, P/S Resource Application (35)
James H. Boyd, Rel. & Control (35)
Robert J. Kennedy Jr., Proj. Admin. (35)
Gilbert M. Beanland, Maint. Rearrangement (36)
William J. Cody, Mgmt. & Stf. (43)
Kenneth J. Walch, Mgmt./Stf. (43)
Gerald D. Markham, A/C Sys. Serv. (81)
John A. Boyle, Production (88)
Arthur H. Meyer, QC Supplier (89)

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Hubert C. Farrell, Prod. Mfg. Budgets (2)
Christopher J. Rizzuto, Conventional Mach. (3)
Harold G. Hofmann, Conventional Mach. (3)
Louis F. Giordano, Chem. Mill (3)
Alfonso Naporano, N/C Mach. (3)
William H. Koop, Facl. Maint. (3)
Leighton Johnson, Support Equip. Prod. (5)
Walter V. Muller, Support Equip. Prod. (5)
Francis A. Matuszek, P/S Engg. Mgmt. (5)
Ronald H. Hazelton, Training & Devel. (6)
Brian T. Degnan, Support Engg. (6)
Henry A. Taylor, Jr., Meas. Stnd. Engg. (6)
Robert S. Kito, Trans.-Ops. (7)
Robert J. Mayette, Mission & Sys. Analy. (7)
John A. Szczepanski, Meas. Stnds. Admin. Ops. (12)
Raymond J. Holland, Inst. Mgmt. & Stf. (14)
Walter T. Demchuk, P/S Dev. Engg. (15)
Robert J. Burtis, Prog. Qual. Mgmt. (15)
George J. Eberhardt, Trans.-Ops. (20)
Dominick R. Virgilio, Prog. Quality Mgmt. (25)
David J. Winthrop, Prog. Mgmt. A-6 (25)
Alfred J. Shackles, Jr., Support Sys. Mgmt. (25)
Carl Chaseck, Plant Protection (27)
George R. Nelson, Jr., Comm. & Spec. Prod. (30)
Lewis Moores, Plant Protection (34)
Myron M. Mueller, P/S Sys. Tech. Mgmt. (35)
George M. Murphy, Facl. Maint. (35)
Norman Reinertsen, Deputy Director, Great River Ops.
Philip Hampton, Facl. Maint. (44)
Raymond A. Lokkeberg, Engg. (88)
Joachim R. Dietzsch, Production (88)

Set jaunt to Granit C.C. in upstate N.Y., June 6-8

Pack your bags! ... the Grumman Athletic Association has just announced another weekend excursion special. The latest in a growing list of special travel packages offered by GAA is to the Granit Hotel, located in Kerhonkson, N.Y., on June 6, 7, 8.

The Granit Hotel — Country Club has something for everyone ... indoor pool, tennis, horseback riding, saunas and health clubs, indoor ice rink, night club shows, live dance-band music. And for golf buffs, there is a course on the premises with electric carts, and an indoor miniature course (greens fee not included in package price).

The $89 per person package includes:

- two nights accommodation at the Granit, double occupancy
- round-trip transportation by deluxe coach with lavatory
- all gratuities
- three meals a day on Saturday and Sunday

All Grummanites, retirees, family members, and friends are eligible to sign up for this upstate New York weekend excursion. Reservations may be made in person at the GAA office in Plant 30, or by mailing a check to Grumman Athletic Association, Plant 30, Grumman Aerospace, Bethpage, N.Y. 11714. Full amount of $89 per person is requested when registering. Reservations will be accepted on a first-come basis as long as space is available.

If you have any questions, contact Rete Looney, GAA, Ext. 2133 or 2269.

Plan 'health fair' at Farmingdale, May 4

You are invited to a health fair, co-sponsored by the North Nassau Mental Health Center and the Department of Nursing at the State University at Farmingdale, on Sunday, May 4, from noon to 6 p.m. at Roosevelt Hall, State University, Farmingdale. There is no admission fee.

Among the subjects to be discussed will be alcoholism, drug abuse, learning disabilities, sudden infant death, neurological disorders, etc. There will also be free health services offered by the Department of Nursing, including blood pressure testing for hypertension, urine test for diabetes, pre-school vision screening, and chest x-rays.

The fair opens with an introduction session in the Little Theater at the university, and, following that, all who attend are invited to inspect the literature and ask questions of each participating organization. The State University at Farmingdale is located on Melville Road, off Route 110, and is accessible from Southern State or Long Island Expressway. Those attending the health fair should use parking field 9 at the university.

Ottumwa reunion

The first reunion of veterans who served or trained at the Ottumwa, Iowa, Naval Air Station during World War II is set for August 22-24 on the grounds of the air station. The get-together, sponsored by Antique Airmen, Inc., will feature the Navy's Blue Angels precision flying team, "warbirds," and training aircraft in service at Ottumwa during the era. If you plan to attend, please contact Mrs. Pat Friedman, 609 Hill St., Highland Park, Ill. 60035.

Dynamic duo. Rich Washington and Larry Tarvin (R) were instrumental in the Grumman basketball varsity's successful bid for the league title. (Photo by Bob Settles)

Boyhood pals help cagers capture Industrial net title

In the L. I. Industrial basketball league, the only crown the Grumman varsity has ever worn had to be shared with the Nassau Police hoopsters, that was in '73. But this season, the Hellcats captured the league title just for themselves.

The Hellcats have always been a strong rebounding team, thanks to the likes of Jim Heine, Fornd Farmer, and Nat Kelly. But this year, the varsity cagers greatly improved their offensive forces with the help of two newcomers. Larry Tarvin and Rich Washington scored 857 points during the regular season out of the total team effort of 2,199 points. These two members of the offensive attack squadron might be called "rookies" since this is their first season at Grumman, but that is as far as the label goes.

Both players have known each other for the past 12 years. They attended Hempstead High School, and had a mutual meeting place — the basketball court.

While playing for Manhattan College, Larry or "Super T" as some of his teammates refer to him, averaged 18 points during his senior year.

In Larry's mind, "the only reason for defense is to get possession of the ball so you can shoot it through the hoop." And that he performed to a "T" by scoring 432 points this season for a 25.4 average.

"If I have to, I'd go inside for a shot, but why kill myself?" says the 6 ft. 4 in. Budget Analyst from Plant 30. "I usually stick to my 20 foot jump shot ... then the only injury I have to worry about is landing back on the court.

Now, Richie Washington is another story ... that guy just runs around, jumping higher than anyone, and amazingly scores some baskets now and then," quips Larry. "Seriously though, he's been a dynamic basketball player even when we played playground ball."

Richie Washington is modest about his court prowess. His teammates call him the "Hi-Riser." "I suppose that's because I'm 5 ft. 11 in. and a lot of players we come across on the courts are a lot taller. I make up for the deficit in height by outjumping them." And adds Larry, "outrunning them, too."

This Hellcat guard who works in Business Control, Plant 15, played varsity ball for three years at Bethene-Cookman College in Florida, averaging 22 points a game. "Never made the pros," reflects Richie as if it is the NBA's loss not his. While Larry prefers to hit the hoop from the outside, the "Hi-Riser's" game plan is to outwit the stronger and taller players with his speed and agility — under the boards, around the key, and along the baseline. "You must have a fast-breaking attack, then you can catch the opposition off balance." It definitely worked for the Hellcat hoopster this season. He scored 425 points in 24 games.

For Tarvin and Washington there are no four seasons in the year. There is only one — the basketball season.

Dig deeper, folks ...

Twi-light golfers, take heed. The Bethpage State Park greens fee for after 5 p.m. starts has been "upped" to $3.50. Greens fees for play before 5 p.m. has already been inflated to $4.50.

Predict 14-karat season for varsity diamond teams

"Gotta feeling '75 is going to be a good year," is what Grumman varsity softball managers, Jack Keane and Joe Neves, are predicting.

Keane, men's varsity manager, reports that in addition to returning veterans from last year's squad, 18 new prospects have been participating in the tryouts — and at least seven players have a good shot at landing a varsity position.

Last year's Intruder team captured the Metro-Industrial League crown at Jones Beach to earn a crack at the National Industrial Softball World Series title. But as it is in life, the tourney episode ended with a lot of "if's." The varsity finished 14th out of 50 industrial teams, and they are itching to return to the World Series and better the score.

Some of the returning Intruder standouts are: first baseman John Burns, shortstop Dominic Pagnozzi, pitcher Dan Cooper, catcher Jim Verteramo, and outfielders Bill Diercks and Greg Ryan.

A welcome problem

Joe Neves, who manages the women's varsity team, has a problem ... but a most pleasant one at that. A slew of top-notch ball players have been attending the tryouts. "In addition to having a solid corps of returning players from last year, we've had several all-around players vying for a varsity berth." Some of those newcomers to the Grumman diamond are: Valerie Pesce, Linda Scrage, Nancy Bradley, and Hermie Golddecker.

By the time the Industrial league season opens in May the women's varsity will be stronger than ever, says Neves. Backing up his predictions is the return of the team's most valuable player last year, Joan Schwab, outfielders Pat Ogilvie and Kathy Jordan, infielder-outfielder Ellen Carlock, and pitcher Carol Mayer.

"With the added depth and a strong offensive-defensive punch, the rest of the 18-team Industrial league (including the Credit Union team) have ample warning," says Neves. "This year's Grumman women's varsity is on the move."

Grumman nites at Shea

Be a big spender at bargain prices; take yourself and a few friends out to the ballgame at Shea Stadium. Discount tickets are now on sale at the GAA office in Plant 30 for the following games: May 16, Yankees vs. Oakland A's ($4 a seat); and June 20, Mets vs. Pittsburgh Pirates ($3.50 a seat). Round-trip bus tickets are also available for an additional $2. Call the GAA office on Ext. 2133 for more information.

Lacrosse tix

If baseball isn't your bag, how about box lacrosse. The '74 national lacrosse league champions, the Tomahawks, will be playing their home games at the Nassau Coliseum.

Discount tickets — $6.50 for $4 — are now on sale in the Plant 30 GAA office for the following games: Wednesday, April 30, Montreal; Wednesday, May 14, Maryland; and Tuesday, May 27, Quebec.

Railroad yard. Over 900 Grummanites and their families visited the Model Railroad clubhouse during the club's open house on March 19 and 22. The railroaders meet every Wednesday night in the barracks-type building near the Plant 3 railroad crossing (where else?). Contact Ray Muntz on Ext. 84083 for more information.

The way it was ...

Thirty-eight years ago, on April 8, 1937, the Grumman Company, then some 300 people and assorted equipment, moved to its present site in Bethpage. Back of this move were seven long, eventful years in rented buildings in Baldwin, Valley Stream, and Farmingdale that had seen the company begin to emerge as a prime contractor of naval aircraft. From the flying field at Farmingdale had come some 253 airplanes — fighters, scouts, and amphibians. From the flying field at Bethpage would come airplanes by the thousands.

Early in 1936, the company acquired 120 acres in Bethpage as a potential site for its own plant. Jack Gifford, a former Grumman employee now retired, remembers that prior to the company's acquisition of it, the property was leased by a hunt club composed mainly of local farmers, who fancied the sporting life, including trotting, flat races, and fox hunting. They obtained their horses from the Jamaica race track. Another Long Islander, Dr. Fleming of Wantagh (then a police surgeon in New York City) was an avid polo player. Unfortunately, the good doctor was left-handed and therefore was not permitted to play on the fields of Meadowbrook. He brought his left-handed game to the hunt club, building a polo field at the Bethpage site. For this reason the Grumman property was known for a long time locally as the old polo field.

Construction of Plant 1 started in the latter part of October 1936 and the building was ready for occupancy the following April. The original building contained 90,200 square feet of floor space, which was increased by over 9,000 square feet the following year. Extension of the factory and addition of a new hangar in December 1939 increased the area by another 55,200 square feet. Grumman was growing ... and rapidly.

The rural surroundings of the Bethpage facility would continue until the post-war expansion represented by Levittown and other housing developments brought suburbia right up to the fences of the flying field. It was these rural surroundings that probably occasioned Roy Grumman's wry reference to himself and his associates during the war as the "embattled farmers."

It is also interesting to recall that about the time the company purchased the land for Plant 1, the village was changing its name from Central Park to Bethpage. That came about as a result of the villagers' annoyance at being confused with New York City's Central Park. Bethpage was the name given by the original settler, Thomas Powell, to a large area of land, including most of the village, which he purchased from the Indians in 1690. Somehow, Grumman, Bethpage, seems a more appropriate address than Grumman, Central Park.

Grand Opening. Aerial view of Plant 1 at Bethpage during its first week of operation in 1938. (Story by Andre Hubbard, Grumman historian)

calendar

Notice of events for period May 9 to May 23 should reach Plane News office by April 30.

Duplicate Bridge Club: Every Thurs., 6 p.m., Pl. 30 cafe; partnerships arranged; guests welcome. Phil Hodge, Ext. 1195.

GACE Flying Club: Fri., May 9, 5 p.m., Pl. 28; FAA film; business meeting & hangar flying; guests welcome. Betty Schledorn, Ext. 7372.

Grumman Cycle Touring Club: Sun., April 27, 9:30 a.m.; two tours arranged, 65-mile trip & 25-mile trip; Sun., May 4, 9:30 a.m., 50-mile trip; guests welcome. Dave Hartman, Ext. 86212.

Grumman Family Campers: May 2-4, Hewlett Bay Park, Nassau County; May 9-11, Eisenhower Park. Earl Schroeder, Ext. 1923, nights.

Old Friends Club: Sat., May 3, 9 a.m., K of C, Farmingdale; Spring Dance — $25 couple; guests welcome. Jerry D'Agostino, Ext. 9145; Matty Tropiano, Ext. 86191.

Rod and Gun Club: Every Mon., 8-10 p.m., Naval Reserve Training Center, Huntington; every Tues., 6-8 p.m., Colonial Firearms, Levittown; every Thurs., 6-10 p.m., Old Bethpage Club Range, W. Babylon; every Fri., 6-8:30 p.m., Marine HQ Range, Garden City; practice & matches; open to all Grummanites. Call GAA for information.

Ski Club: Wed., May 7, 8:30 p.m., Plaza Restaurant, Old Country & Newbridge Rds.; skiing/social; guests welcome. Donna Marie Petresky, Ext. 6466.

Set flower show for May 7

Spring has finally decided to arrive on Long Island. The weather might have been unseasonably cool and brisk in early April, but flower buds have begun to peek out of the earth.

And for all those with "green thumbs", what better way to exhibit your prowess in assisting mother nature than to enter the Grumman Garden Forum's first show of the season on Wednesday, May 7. The show is open to all Grummanites and retirees.

On the judging list are tulips (single and parrot), narcissus, lilac, azalea, arrangements, and other seasonal flowers. Trophies and other awards will be presented to winners and runners-up in each class, and there will be a special prize for novices in single tulip.

All floral entries must be in the Plant 5 cafeteria no later than 8:30 a.m. on the day of the exhibit. If you are in an outlying plant and wish to enter, contact Kay Zuk, on Ext. 3391, and she will arrange for your entry to be picked up that morning.

Payroll note ...

Starting with the paychecks to be distributed on May 1, the new Federal Withholding Tables will become effective and will result in a reduction in Federal income taxes withheld, according to Bob Nolan of Payroll Operations.

Also, a new form, W-4 "Employee's Withholding Allowance Certificate," and new itemized deduction tables will be available in the near future for those who may want to make a change.

Short stops ...

Jet planes travel pretty fast, but contrary to popular opinion, news sometimes takes a little longer. For instance, last September Lt. Cdr. Bruce Bremner celebrated his 500th carrier landing while deployed with VA-65, an Intruder attack unit, aboard the USS Independence. Bremner, operations officer for the squadron, flies with Bombardier/Navigator Cdr. C.D. Hawkins Jr., skipper of the Tigers.

In his 11 years as a pilot, Bremner has served with VA-35 aboard the Enterprise in the Western Pacific, as an A-6 flight instructor in VA-42, attended test pilot school at Patuxent River and remained there as project pilot on the A-6 weapons system test, and joined VA-65 about three years ago.

GRUMMAN plane news

ADDRESS CORRECTION REQUESTED

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